ecology

areas of ecology

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# Definitions of ecology

Ecology is the science which studies the biota, the environment, and their interactions. It comes from the Greek oikos = house; logos = study.

Ecology is the study of ecosystems. Ecosystems describe the web or network of relations among organisms at different scales of organization. Since ecology refers to any form of biodiversity, ecologists research everything from tiny bacteria in nutrient recycling to the effects of tropical rain forests on the Earth's atmosphere. Scientists who study these interactions are called ecologists.

Ecology, also referred to as environmental science, is the technical study of the distribution and abundance of living organisms and how the distribution and abundance are affected by interactions between the organisms and their environment. The environment of an organism includes both physical properties, which can be described as the sum of local abiotic factors such as astral insolation, climate and geology, as well as the other organisms that share its habitat. The term Ökologie was coined in 1866 by the German biologist Ernst Haeckel; the word is derived from the Greek οικος (oikos, "household") and λόγος (logos, "study"); therefore "ecology" means the "study of the household (of nature)".

There are many useful applications of ecology in conservation biology, wetland management, natural resource management (agriculture, forestry, fisheries), city planning (urban ecology), community health, economics, and applied science. It provides a framework for understanding and researching human social interaction.

# Ecology in politics

Ecology starts many powerful philosophical and political movements - including the conservation movement, wellness movement, environmental movement, and ecology movement we know today. When these are combined with peace movements and the Six Principles, they are called green movements. In general, these put ecosystem health first on a list of human moral and political priorities, as the way to achieve better human health and social harmony, and better economics.

People with these beliefs are called political ecologists. Some have organized into the Green Parties, but there are actually political ecologists in most political parties. They very often use arguments from ecology to advance policy, especially forest policy and energy policy

# Ecology includes economics

Many ecologists also deal with human economics:

Lynn Margulis says that economics studies how humans make a living, while ecology studies how every other animal makes a living.

Mike Nickerson says that "economy is three-fifths of ecology", since ecosystems create resources and dispose of waste, which the economy assumes is done "for free".

Ecological economics and human development theory try to separate the economic questions from others, but it is difficult. Many people think economics is just part of ecology now, and that economics that ignores it is wrong. "Natural capital" is an example of one theory combining both

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# Ecology and anthropology

Sometimes ecology is compared to anthropology. Anthropology includes how our bodies and minds are affected by our environment, while ecology includes how our environment is affected by our bodies and minds. There is even a type of anthropology called ecological anthropology, which studies how people interact with the environment.

Antoine de Saint-Exupery stated: "The earth teaches us more about ourselves than all the books. Because it resists us. Man discovers himself when he measures himself against the obstacle

# Ecology and population

The human population is growing at a logistic rate and has been affecting the populations of other species in return. Chemical pollution, deforestation, and irrigation are examples of means by which humans may influence the population ecology of other species. As the human population increases, its effect on the populations of other species may also increase

Populations cannot grow indefinitely. Population ecology involves studying factors that affect population growth and survival. Mass extinctions are examples of factors that have radically reduced

populations' sizes and populations' survivability. The survivability of populations is critical to maintaining high levels of biodiversity on Earth.

Population ecology is a sub-field of ecology that deals with the dynamics of species populations and how these populations interact with the environment.[1] It is the study of how the population sizes of species change over time and space. The term population ecology is often used interchangeably with population biology or population dynamics.

The development of population ecology owes much to demography and actuarial life tables. Population ecology is important in conservation biology, especially in the development of population viability analysis (PVA) which makes it possible to predict the long-term probability of a species persisting in a given habitat patch. Although population ecology is a subfield of biology, it provides interesting problems for mathematicians and statisticians who work in population dynamics.